May 18, 2005
MDPB Minutes

Members in Attendance: David Ettinger, Beth Collamore, Eliot Smith, Steve Diaz, Dave McKelway, Kevin Kendall, Al Riel

Absent: Paul Liebow

Staff: Jay Bradshaw, Dwight Corning

Guests: Kim McGraw, Rick Petrie, Tom Judge, David Stuchiner, Dan Batsie (and Boundtree Guests), Dan Palladino, Norm Dinerman, Jim Caron, Sandy Benton, Lori Metayer, Joanne LeBrun, Rhonda Chase

I. Minutes: Motion by Kendall, second by McKelway: unanimous approval with some grammatical changes by Bradshaw

II. Boundtree with CPAP device: demo of device which uses less air; see later in these minutes for vote surrounding acceptance of this device.

III. Legislative/Budget/EMSTAR: Legislature still with some consideration over the budget, thus the budget is potentially in flux. EMS Star groups beginning to meet, see Jay for the schedule.

IV. Debriefing meeting: 1 pm on June 15, Drexell will be asked to facilitate (done)

V. Maine ACEP position statements:

Maine ACEP Position Statement

The Maine Chapter of the American College of Emergency Physicians supports the findings of the Maine EMS EMSTAR study and looks forward to their implementation. In addition Maine ACEP strongly encourages the uniform statewide ability of all EMS providers to activate the state air medicine system directly.

Maine ACEP Position Statement

The Maine Chapter of the American College of Emergency Physicians acknowledges the successful use of rapid sequence intubation (RSI) that the state air medicine program has provided since its inception in

1998.This success is based upon crew composition, stringent education, training, skills maintenance, and quality assurance program. Performance improvement is ongoing and centered on evidence based literature.

Maine ACEP will not support the use of RSI by ground prehospital providers unless a program of similar and parallel high standards is embraced. Maine ACEP especially opposes attempts to intubate patients using narcotics in ways that are outside the realm of the prehospital EMS protocols.

Discussion surrounding these statements, and request that such statements may foster more inclusion if advertised before meetings or tabled one meeting for a vote so that interested ACEP members or MDPB members can provide comment. Also, these are noted to be non-binding.

VI. LOM

DRAFT
LifeFlight of Maine
Replaces Policy #3.15
Title: Ground Transports
Date Revised 5/1/05

Purpose:
To offer an alternative method of transport to the referring hospital and local EMS providers when the aircraft is not available due to weather, maintenance or simultaneous call.

Policy:
Interfacility-When receiving a call requesting an interhospital helicopter transfer in the event that LifeFlight of Maine is unavailable, MedComm **will offer** the referring hospital, if available, the option of having a LifeFlight flight crew, respond to the facility or intercepting en route via ground ambulance.

Scene-When receiving a call requesting a scene response in the event that LifeFlight of Maine is not available to fly; MedComm **will offer** the requestor, if available, the option of having a LifeFlight flight crew, respond to the scene of the accident or event; or intercepting the critically ill patient(s) en route to the trauma center. This policy will encompass a 35 mile radius from the base (CMMC or EMMC).

The same skills, protocols and responsibilities that are granted for air transport will be utilized for ground interfacility and scene transport by the LifeFlight flight crew if the aircraft is unavailable for flight response.

Procedure:

If the referring physician or agency wishes to utilize this service MedComm will proceed with the following:

A. Obtain patient transport information

B. 1. Contact on duty flight crew(s)

2. Contact MACO for approval for Ground Critical Care transport per hospital protocol.

3. Contact Meridian Mobile Health in Bangor or United Ambulance in Lewiston, advise the ambulance or transport vehicle to pick up crew and equipment at CMMC or EMMC.

4. Advise referring hospital or EMS/requesting service of estimated time of arrival not number of minutes enroute remembering the launch time of ground service may be longer than that of aircraft launch.

C. Arrange intercept location as appropriate for scene response

D. Update Mission Approval Consultation Officer of transport status.

E. MedComm should provide 30-minute transport updates of crew location. Noting that once on scene the crew should not be interrupted while providing patient care. If there is a delay in transport the crew will notify MedComm so they may pass the information along to the MACO and receiving institution.

F. The Critical Care Transport Team/Flight Crew will follow LOM protocols while operating in a ground based unit and utilize their standard critical care equipment as appropriate. Equipment will be secured during the transport.

G. The Critical Care Transport Team/Flight Crew will follow all safety guidelines established for operating in a ground-based ambulance. Transports **SHOULD NOT** be done with lights and sirens unless the crew can document that the patients diagnosis is time sensitive and definitive emergent treatment is waiting at the receiving institution. In unsafe road conditions in which the authorities have closed the roads, the transport should be delayed based on road conditions and patient condition. If the sending institution/ground service insists on the transport being initiated and the transporting crew (Meridian/United/LOM) feel that the conditions are too unsafe, they will consult with the MACO for further dialogue with the sending physician or ground service.

Referral Policies:

3.07 Request for Scene Transfer(s)
3.15 Ground Transports (5/1/03)
Meridian Vehicle Safety Policy
United Vehicle Safety Policy

Discussion surrounding this document form all members. Presentation of Document by Dinerman, and support by Diaz as an attempt to fully utilize available resources
Smith: concerned of opening a primary ground level critical care service, concerned of the role or lack of role of MAO, and would like these runs to have open QA with report back to State QI or MDPB; also concerned that helicopter not available because crew is doing a ground transport.
Collamore: Question of the time or distance limit for interfacility, and there is none—35 miles for 911 calls.
Ettinger: Supportive of the service of LOM, but ground transport would not benefit his area.
Riel: Advocates for calling but also using common sense—do not sit on a scene with a critical patient—move towards closest ED no matter what the call.
Kendall: no one should wait for LOM on ground
Petrie: asked for clarification of MACO (Mission Approval Consultation Officer); who are the MACO—answered by Dinerman that all the MACO's are physicians that are either Lifeflight specific or physicians in EMMC or CMMC ED's; also asked that those who call LOM have advice given that moving patients towards the hospital is appropriate if the response is to be by ground because of the aforementioned problems with helicopter availability.
Metayer: anecdotes supporting this concept.
Corning: Makes sure ALS is dispatched if LOM not available by air, especially if this is not the norm.
LeBrun: noted sometimes issue with appropriate ground transport (ALS back up) and questioned what happens with QI and perhaps the MAO can be eliminated.
Smith with motion to table for one meeting to rework the proposal to include overt language that air mission first whenever possible and outline quarterly QI to MDPB; Second by Collamore: 5 in support; one against; one abstain.

VII. OLMC: began with querying chairs for the subgroups and McKelway identified for the Overview group; LeBrun then queried whether or not we may be overextended with upcoming protocol updates and EMS Star work groups; straw poll supports the feeling of over extension and request to delay this for four months.

VIII. Go Box document: this is preliminary and mainly informational; looking for comment from all, and this is a collaborative project with BOH; if the items selected are correct, will present to the MDPB, and then put into process (side note: the debriefing next month should help delinate this) for protocol development:

Go Box Protocols

MEMS
May 2005

Calcium Gluconate Gel

Number in Go Box: 12 tubes which are each 60 grams

Indications
Calcium gluconate gel is used to treat topical exposures to hydrofluoric (HF) acid

Mechanism of Action
Inactivation of the fluoride ion with calcium that results in the precipitation of insoluble calcium flouride

General Considerations
Limiting the duration of the exposure decreases the severity of the toxicity
Remove the patient's clothes to prevent continuous exposure to the HF
The affected area should initially be irrigated with water for 30 minutes
The area should be liberally covered with calcium gluconate gel and reevaluated and redressed every 4 hours
The duration of treatment should continue until pain is relived. Relief of pain is an excellent indicator of treatment efficacy
Surgical gloves filled with the gel are useful for treating hand burns
Topical therapy may not he effective if:
*Patients who present with pain and blanching of the skin after contact with HF
*Exposure to concentrations of HF greater than 20%
*Pain persists for longer than 45 minutes

Topical Therapy
Calcium gluconate 2.5% gel is the most effective means of treating superficial HF burns
The gel is commercially available and should be applied immediately after irrigation
If the commercially prepared gel is not available, calcium gluconate gel can be made by mixing 5oz (75-150ml) of surgical lubricant with 2.5 to 3.5 g of calcium gluconate powder or 25ml of 10% calcium gluconate solution
If calcium gluconate is not available, 10 calcium carbonate tablets can be crushed to a fine powder and mixed with 20ml of surgical lubricant

Inhalation
Systemic toxicity is likely
Administer 100% humidified oxygen
Transport immediately
Nebulized calcium gluconate may be beneficial but this should be accomplished in the emergency department

Ingestion
Dilution and neutralization of the fluoride ion can be accomplished by giving the patient milk of water
The calcium in the milk has the ability to bind the fluoride ions

Mark I Kit

Number in Go Box: 36

PROTOCOL FOR THE USE OF MARK I KITS
Purpose: These are antidotes to be used in instances of exposure to a nerve or organophosphate agent.
Use: The Mark I is to be used only if you are part of the MMRS and/or a Municipal Response Plan and with consult with OLMC.
Contents: (1) Atropine Auto-Injector (2 mg total dose per injection) (2) 2-PAM (2-PAM CL; pralidoxime chloride) 600 mgs. total dose per injection.
- NOTE: These injectors are not to be used as a prophylactic modality. There is to be no self-administration of the antidote.

Atropine Sulfate:
Indications
Specific physiologic antagonist for toxic exposures to organophosphates, carbamates, and nerve agents.

Mechanism of Action
Anti-cholinergic, blocks the effects of excess acetylcholine at the parasympathetic muscarinic receptor sites
Inhibits secretions from the nose, eyes, lungs, and skin
Relaxes smooth muscle contractions, reducing brochoconstriction
Increases tone and motility of the gastrointestinal and genitourinary tract
Dilates pupils
Has no effect on skeletal muscles (nicotinic receptors)

Side effects of atropine therapy
Symptoms consistent with anti-cholinergic crisis
Dry mouth, blurred vision, urinary retention, tachycardia, and the inability to sweat.
Symptoms are considered minor and can last for 24-48 hours.

Dosage
An auto-injector is the preferred method of administering atropine for acute nerve agent exposures. Atropine, along with 2 Pam Chloride are administered concurrently and the administration is based on the patients presenting signs and symptoms. Dosage and administration of both drugs will be listed below.

Atropine is available in 2mg auto-injectors (MK I) and 2mg pre-filled syringes
2 Pam Chloride is available in 600mg auto-injectors

2 Pam-Chloride

Indications

Used in conjunction with atropine chloride to treat patients exposed to organophosphates and nerve agents

Mechanism of action

2 Pam Chloride breaks the bond between the nerve agent & acetylcholinesterase, unless aging has occurred.
Increases skeletal muscle strength, reduces skeletal muscle fasciculations
Acts on nicotine receptors, Has no effect on muscarinic receptors

Dosage

The current recommended dose of 2 Pam-Chloride is 30mg/kg or a maximum single dose of 2g

Side effects of 2 Pam Chloride therapy

High doses or rapid administration may cause
Elevation of Blood Pressure
Muscle spasms > Spasm of larynx resulting in airway obstruction

Auto Injector Use (a) Pre measured doses in auto-injectors should be safe for most adults. (b) Atropine auto-injector and Pralidoxime (2 PAM CL) may be administered by qualified emergency personnel and designated emergency responders who have had adequate training in on-site recognition and treatment of nerve and or organophosphate agent intoxication in the event of a chemical release. This is specific to the disaster setting. (c) Medical treatment is directed to relieving respiratory distress and alleviating seizures.

Indications for use of the Auto Injectors (a) It is a concern that the use of auto-injectors could lead to administration of inappropriate and harmful doses during a non-chemical agent or minimal exposure situations. The auto-injectors are to be used only if the patient presents with SLUDGEM + RESPIRATIONS and AGITATION. (b) The Atropine and 2-PAM CL auto injectors should be used by qualified emergency medical personnel and designated emergency responders only after the following events have occurred:

1) The recognition of the existence of a potential chemical or organophosphate agent release in an area.
2) Some or all of the symptoms of the nerve agent poisoning cited below are present:

SLUDGEM + RESPIRATION and AGITATION
S – salivation (excessive drooling)
L – lacrimation (tearing)
U – urination
D – defecation / diarrhea
G – GI upset (cramps)

E – emesis (vomiting)
M – muscle (twitching, spasm, “bag of worms”)
+ RESPIRATION – difficulty breathing / distress (sob, wheezing)
+ AGITATION
+ CNS SIGNS – confusion, agitation, seizures, coma.

3) Atropine must be given first, do not give anything else until the effects of atropine become apparent. Only when the effects of the atropine have been seen can you then give 2 – PAM CL.
4) If symptoms resolve, then only monitoring is necessary.
5) If severe signs and symptoms are present; three (3) Atropine auto-injectors and three (3) 2-PAM CL injectors should be administered in rapid succession (stacked). 1. Remove secretions 2. Maintain an open airway 3. Use artificial ventilation in necessary and possible 4. Repeat Atropine immediately as directed
6) Pralidoxime (2-PAM CL) is most effective if administered immediately after the poisoning but not before Atropine, especially for severe exposures.
7) If available Diazepam (Valium) may be cautiously given, under direct medical control, if convulsions are not controlled.
8) When the nerve agent has been ingested, exposure may continue for some time due to slow absorption from the lower bowel, and fatal relapses have been reported after initial improvement. Continued medical monitoring and transport is mandatory.
9) If dermal exposure has occurred, decontamination is critical and should be done with standard decontamination procedures. Patient monitoring should be directed to the same signs and symptoms as with all nerve or organophosphate exposures.

Diazepam (Cana)

Number in Go Box: 12

Indications / Mechanism of Action
Anticonvulsant, Used for seizures associated with nerve agent exposure

Side effects of Cana therapy
Cardiovascular collapse (hypotension & bradycardia)
Respiratory depression

Dosage
10mg auto-injector.
Effective anti-convulsant dose 30-40mg

Tetracaine Hydrochloride

Number in Go Box: 12

Indications
Ocular pain relief to facilitate irrigation with Morgan lens

Dosage
1-2 drops in the affected eye
May use 1-2 drops every 15 minutes if needed for prolonged transport or field treatment time. Maximum is 3 doses

Side Effects
Transient stinging, burning, and conjunctival erythema
Allergic reactions in patients with “Caine” allergies
For short term use only. Long term use can cause corneal opacities

Morgan Lens Irrigation System

Number in Go Box: 12

Indications
To facilitate ocular irrigation

Instructions for use
Instill 1-2 drops of a topical anesthetic (Proparacaine) in the affected eye
Connect the Morgan Lens to intravenous (IV) tubing that is attached to a bag of Normal Saline
Manually open the patients eyelids and ask the patient to look down and insert the lens under the upper lid. Have the patient look up, retract lower lid and drop the lens into place
Release the lower lid over the lens and adjust the IV flow rate
Position the patient so the IV solution drains away from the other eye
Tape the IV tubing to the patients forehead to prevent the lens from being inadvertently pulled out
Do not allow the IV solution to run dry

Instructions for removal
Continue IV flow
Ask the patient to look up
Retract lower lid and hold in place
Slide lens out

Albuterol Metered Dose Inhaler (MDI)

Number in Go Box: 12

Indications
Brochospasm associated with exposure to a respiratory irritant
Audible wheezes related to non-cardiogenic pulmonary edema

Mechanism of action
Causes relaxation of bronchial smooth muscle by stimulation of Beta2 adrenergic receptors

Dosage
2-4 puffs every 15 minutes by metered dose inhaler with spacer

Side Effects
Tachycardia
Hypertension
Palpitations
Nervousness
Tremor
Paradoxical bronchospasm may be associated with repeated use

Sodium Thiosulfate

Number in Go Box: 12

Indications
Sodium Thiosulfate is administered to patients who are exposed to cyanide and are exhibiting severe symptoms that do not respond to aggressive supportive therapy.

Mechanism of Action
Cyanide is a potential Weapon on Mass Destruction agent, but it can also be generated during a fire from the combustion of nitrogen and carbon containing materials, including, wool, silk, cotton, paper, plastics, and other polymers

Produces its toxic effects by interfering with the utilization of oxygen at the cellular level causing cellular anoxia

Sodium Thiosulfate converts cyanomethemoglobin to thiocyanate that is then secreted by the kidneys.

Dosage
Adult: 1ampule IV over 10-20 minutes
Pediatric: 1.6ml/kg IV over 10-20 minutes

Side Effects
Nausea and vomiting
Ensure that the patient's airway is protected
Local pain at the injection site

Appendices

Mark I Trainers

Number per Go Box: 20

Nerve Agent Treatment Protocols

Treatment is based on the patients presenting signs, symptoms, and the route of exposure

Vapor Exposure

Exposure Category	Signs and Symptoms	Therapy:
Minimal	Miosis with or without Rhinorrhea. Nausea and vomiting	Onset of symptoms: <5min of exposure: 1 MK I >5min of exposure: Observe
Mild	Miosis Rhinorrhea Mild dyspnea Nausea and vomiting	Onset of symptoms: <5min of exposure: 2 MK I >5min of exposure 0 or 1 MK I Base treatment on the severity of the dyspnea
Moderate	Miosis, rhinorrhea; moderate to severe Dyspnea, Nausea and vomiting	Onset of symptoms <5min of exposure 3 MK I's + Cana >5min of exposure 1-2 MK I's
Moderately Severe	Severe dyspnea Gastrointestional or Neuromuscular signs	3 MK I's + Cana Respiratory Support
Severe	Loss of consciousness Seizures Flaccid Parlysis Apnea	3 MK I's + Cana Respiratory Support & Suction

Dermal Exposure

Exposure Category	Signs & Symptoms (Progressive)	Therapy

Mild	Localized sweating & Fasciculations	1 Mark I kit
Moderate	Gastrointestinal signs & symptoms	1 Mar I kit
Moderately Severe	Gastrointestinal signs plus respiratory and / or neuromuscular signs	3 Mark 1 kits
Severe	Same as for severe vapor exposure	3 Mark 1 kits, respiratory support, suction, Cana

End points of treatment
There is a noticeable reduction in oral, nasal, and pulmonary secretions
Shortness of breath / dyspnea improves
Improved airway compliance

Do not titrate treatment to
Heart rate, this is a variable sign
Miosis can persist for up to 6 weeks
Twitching or fasciculations (nicotinic)

Triage Categories
Immediate
Severe symptoms but with spontaneous symptoms
No loss of consciousness or seizures
Re-triage if patient loses consciousness or experiences a seizure
Excellent chance of survival

Delayed
A patient that is recovering from a severe exposure
Spontaneous respirations return after ventilatory support and antidotes

Minimal
Casualty is walking and talking

Expectant
No blood pressure after 3 Mark I kits and Cana

IX. Hall of Flags for EMS awards today

X. RSI subcommittee to reconvene on June 15, 2005 at 8:30 am—request by Petrie

XI. Trip Destination (Dinerman): can we proscript hospital destination based on patient needs if patient requests different facility. Is this also an issue with workplace health issues. Dinerman and Diaz will attempt to provide a written document to direct this discussion. This is a future agenda item.

XII. CPAP Device: motion by McKelway and second by Kendall to approve the device we saw previously in the meeting—unanimous approval.

XIII. Next Meeting at 9:30 am on June 15, 2005.